

# PATENT COOPERATION TREATY

From the:  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

Collison & Co  
GPO Box 2556  
ADELAIDE SA 5001

**COLLISON & CO.**

**23 MAR 2006**

REF. ....

**PCT**

NOTIFICATION OF TRANSMITTAL OF  
INTERNATIONAL PRELIMINARY  
REPORT ON PATENTABILITY  
(Chapter II of the Patent Cooperation Treaty)

(PCT Rule 71.1)

Date of mailing  
(day/month/year) **2 1 MAR 2006**

Applicant's or agent's file reference  
**54844PCT**

**IMPORTANT NOTIFICATION**

International application No.  
**PCT/AU2004/001601**

International filing date (day/month/year)  
**19 November 2004**

Priority date (day/month/year)  
**20 November 2003**

Applicant

**INTELLIGENT ELECTRIC MOTOR SOLUTIONS PTY LTD et al**

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translations to those Offices.
4. **REMINDER**  
  
The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).  
  
Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.  
  
For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the *PCT Applicant's Guide*.  
  
The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed invention is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

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**PATENT COOPERATION TREATY**  
**PCT**  
**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
(Chapter II of the Patent Cooperation Treaty)  
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>54844PCT</b>	<b>FOR FURTHER ACTION</b>  See Form PCT/IPEA/416	
International application No. <b>PCT/AU2004/001601</b>	International filing date ( <i>day/month/year</i> ) <b>19 November 2004</b>	Priority date ( <i>day/month/year</i> ) <b>20 November 2003</b>
International Patent Classification (IPC) or national classification and IPC  Int. Cl.  <b>H02K 3/26 (2006.01)      H02K 15/085 (2006.01)</b>		
Applicant  <b>INTELLIGENT ELECTRIC MOTOR SOLUTIONS PTY LTD et al</b>		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.  2. This REPORT consists of a total of 4 sheets, including this cover sheet.  3. This report is also accompanied by ANNEXES, comprising: a. <input checked="" type="checkbox"/> ( <i>sent to the applicant and to the International Bureau</i> ) a total of 15 sheets, as follows: <div style="margin-left: 20px;"> <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).   <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.   b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or table related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions). </div>	
4. This report contains indications relating to the following items: <div style="margin-left: 20px;"> <input checked="" type="checkbox"/> Box No. I      Basis of the report  <input type="checkbox"/> Box No. II      Priority  <input type="checkbox"/> Box No. III      Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  <input type="checkbox"/> Box No. IV      Lack of unity of invention  <input checked="" type="checkbox"/> Box No. V      Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement  <input type="checkbox"/> Box No. VI      Certain documents cited  <input type="checkbox"/> Box No. VII      Certain defects in the international application  <input type="checkbox"/> Box No. VIII      Certain observations on the international application </div>	

Date of submission of the demand <b>8 September 2005</b>	Date of completion of this report <b>17 March 2006</b>
Name and mailing address of the IPEA/AU  <b>AUSTRALIAN PATENT OFFICE  PO BOX 200, WODEN ACT 2606, AUSTRALIA  E-mail address: pct@ipaustalia.gov.au  Facsimile No. (02) 6285 3929</b>	Authorized Officer  <b>MANO RAMACHANDRAN</b> Telephone No. (02) 6283 2166

**Box No. I**      **Basis of the report****1.** With regard to the language, this report is based on:

- ☐ The international application in the language in which it was filed
- ☐ A translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3(a) and 23.1 (b))
- ☐ publication of the international application (under Rule 12.4(a))
- ☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a))

**2.** With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

☐ the international application as originally filed/furnished

☒ the description:

pages 2-5 as originally filed/furnished

pages\* 1, 6-8 received by this Authority on 24 October 2005 with the letter of 24 October 2005

pages\* received by this Authority on with the letter of

☒ the claims:

pages as originally filed/furnished

pages\* as amended (together with any statement) under Article 19

pages\* 9,10 received by this Authority on 20 February 2006 with the letter of 20 February 2006

pages\* 11,12 received by this Authority on 24 October 2005 with the letter of 24 October 2005

☒ the drawings:

pages as originally filed/furnished

pages\* 1-7 received by this Authority on 24 October 2005 with the letter of 24 October 2005

pages\* received by this Authority on with the letter of

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

**3.** ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to the sequence listing (*specify*):

**4.** ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to the sequence listing (*specify*):

\* If item 4 applies, some or all of those sheets may be marked "superseded."

**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims 1-18,20	YES
	Claims 19,21	NO
Inventive step (IS)	Claims	YES
	Claims 1-21	NO
Industrial applicability (IA)	Claims 1-21	YES
	Claims	NO

**2. Citations and explanations (Rule 70.7)**

D1: US 4115915 A

D2: US 3252027 A

D3: US 4947065 A

D4: WO 1995012912 A1

D5: US 6617747 B1

**NOVELTY (N) claims 19, 21:**

Each of the citations D1 and D2 discloses a method of constructing an electric machine by passing at least two electrically insulated wires or other elongate conductors through a respective one of at least two bores which pass through a magnetically inducible core and connecting at least one of the ends of each conductor by a bridging member as in claims 19 and 21. Please see D1: abstract, column 3, lines 39- 54, figs, D2: column 3, lines 18-55, fig 9,]. Hence the invention claimed in claims 19 and 21 is not considered to be novel.

None of the citations listed above discloses an electric machine including magnetically inducible core of a substantially isotropic material, elongated conductors disposed in the slots of the core connected by bridging members on either side of the core as in claims 1 and 18. Claims 2-17 appended to claim 1, claim additional features and hence the invention defined in claims 2-17 and 18, is considered to be novel.

**INVENTIVE STEP (IS) Claims 1-21:**

Claims 19, 21: As above.

Claims 1-18, 20:

Each of the citations D1, D2, discloses an electric machine including a magnetically inducible core having plurality of elongated bores, plurality of elongated electrical conductors passing through a respective bore, plurality of bridging members, each bridging member electrically connecting the corresponding elongated conductors in pairs by connecting the first ends of the elongate electrical conductors disposed on a first side of the core, the second ends of the elongate electrical conductors disposed on a second side of the core so as to form continuous individual multi-phase windings.

Continued

**Supplemental Box**

In case the space in any of the preceding boxes is not sufficient.

Continuation of Box V:

Referring to citation D1 : an electric machine [column 1, lines 50-54] including a magnetically inducible core [20] having a plurality of elongated bores [21], plurality of elongated electrical conductors [15s] passing through a respective bore, plurality of bridging members [15e], each bridging member electrically connects the elongated conductors in pairs by connecting the first ends of the elongate electrical conductors disposed on a first side of the core [19a], the second ends of the elongate electrical conductors disposed on a second side of the core [19c] so as to form continuous individual multi-phase windings [column 3, lines 1-6], the bridging member is a printed circuit board [column 3, lines 30-33], are as claimed.

Referring to citation D2: an electric machine [column 3, lines 12-18] including a magnetically inducible core [2] having a plurality of elongated bores [fig 9], plurality of elongated electrical conductors [16,17,18] passing through a respective bore, plurality of bridging members [10,11], each bridging member electrically connects the elongated conductors in pairs by connecting the first ends of the elongate electrical conductors disposed on a first side of the core [figs 7, 9 ], the second ends of the elongate electrical conductors disposed on a second side of the core [fig 9] so as to form continuous individual multi-phase windings [column 3, lines 23-31], are as claimed.

Each of the citations D3 to D5 discloses an electrical machine having a stator core formed of an isotropic material such as a soft magnetic composite material. Please see in D3: abstract, in D4: page 11, lines 24-28, in D5: abstract.

Hence when the disclosure of the citations D1 or D2 is combined with the disclosure of the citations D3 or D4 or D5, as would be obvious to a person skilled in the art, disclose all of the features of claims 1-9, 11-18 and 20.

Additional features of claim 10 not explicitly disclosed in the above citations merely amount to common general knowledge and does not involve an inventive step.

Hence the invention claimed in claims 1-18, and 20 is not considered to involve an inventive step.

**INDUSTRIAL APPLICABILITY (IA) claims 1-21:**

The invention claimed in claims 1-21 is industrially applicable.'